

五味子属植物的分类学订正

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Taxonomic notes on the genus *Schisandra* Michx.

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Abstract Based mainly on herbarium studies involving more than five thousand specimens from 53 herbaria worldwide and field observations, the genus *Schisandra* Michx. is taxonomically revised. 22 species, seven subspecies, 14 varieties and one form are reduced to new synonyms, 10 species are recognized, and a key to species is given.

Key words *Schisandra*; Taxonomic notes; New synonym

摘要 根据对 12 个国家 53 个标本馆收藏的 5,000 余份五味子属 *Schisandra* 植物标本的研究,结合野外调查和采集,对世界范围的五味子属种类作了分类学订正。在五味子属中,10 个种被确认,22 个种、7 个亚种、14 个变种和 1 个变型的名称被作为新异名。文中附有分种检索表。

关键词 五味子属;分类学订正;新异名

在对五味子属进行研究时,发现一些种类中存在分类问题,现作如下修订:

1 东亚五味子(新拟)

Schisandra elongata (Bl.) Baill. Hist. Pl. 1: 148, f. 182. 1868. — *Sphaerostema elongatum* Bl. in Bijdr. 23. 1825. TYPE: Indonesia. Java, Mt. Burangrang, Blume 1422 (lectotype, L 38285, L!; isolectotype, K).

Schisandra chinensis (Turcz.) Baill. var. *rubriflora* Franch. Nouv. Arch. Mus. Hist. Nat., ser. 2, 8: 192. 1885, syn. nov. TYPE: China. Sichuan, Moupin, A. David s. n. (lectotype, P!).

S. elongata (Bl.) Baill. var. *dentata* Finet & Gagnep. in Bull. Soc. Bot. Fr. 52: Mem. 4: 49. 1905, syn. nov. TYPE: China. Yunnan, F. Ducloux 585A (lectotype, P!).

S. sphenanthera Rehd. & Wils. in Sargent, Pl. Wils. 1: 414. 1913, syn. nov. TYPE: China. Hubei, Badong, E. H. Wilson 313 (holotype, A, photo, IBSC!; isotypes, B! BM! E! HBG! K, US!).

S. arisanensis Hayata, Icon. Pl. Formos. 5: 1, pl. 1. 1915, syn. nov. TYPE: China. Taiwan, Alishan, R. Kanehira, B. Hayata & I. Tanaka s. n., 1914-04-25. (lectotype, TI).

S. neglecta A. C. Smith in Sargentia 7: 127, f. 17: g. 1947, syn. nov. TYPE: China. Yunnan, Yuxi, J. F. Rock 8933 (holotype, A, photo, IBSC!; isotypes, UC! US!).

S. viridis A. C. Smith in Sargentia 7: 129, f. 22. 1947, syn. nov. — *S. arisanensis* Hayata subsp. *viridis* (A. C. Smith) R. M. K. Saunders in Syst. Bot. Monogr. 58: 72. 2000, syn. nov. TYPE: China. Guangdong, Heyuan, W. T. Tsang 28783 (holotype, A, photo, IBSC!; isotypes, G! IBSC! P!).

S. gracilis A. C. Smith in *Sargentia* 7: 132. 1947, syn. nov. TYPE: Myanmar. Sagaing, Katha District, Mogok, F. G. Dickason 5016 (holotype, A, photo, IBSC!).

S. micrantha A. C. Smith in *Sargentia* 7: 135. 1947, syn. nov. TYPE: China. Yunnan, Pingbian, H. T. Tsai 55161 (holotype, A, photo, IBSC!; isotypes, IBSC! PE!).

S. lancifolia (Rehd. & Wils.) A. C. Smith var. *polycarpa* Z. Ho in *Journ. SW Agr. Univ.* 10(3): 294, pl. 3: 1~12. 1988, syn. nov. TYPE: China. Sichuan, Xide, G. H. Tang & J. M. Tan 11 (lectotype, here designated, SM!).

产不丹、中国、印度、印度尼西亚、缅甸、尼泊尔、锡金、斯里兰卡、泰国和越南,生于海拔 200~3000 m 的山地沟谷、山坡林间或灌丛中。

Bhutan(不丹). Tangsa Tsaula, S. B. Lyon 3288 (BM); Adung Valley, F. K. Ward 9443 (BM).

China(中国). **Anhui**(安徽): Yuexi(岳西), M. L. Liu(刘明龙) 525 (PE); Taiping(太平), Anhui Exped. 553 (IBSC); Huangshan(黄山), X. W. Wang(王学文) 873A (IBSC); Xiuning(休宁), Anhui Exped. 1239 (PE); Xixian(歙县), K. C. Kuan(关克俭) 75253 (PE); Qimen(祁门), R. C. Ching(秦仁昌) 3166 (E, IBSC, UC); Jingxian(泾县), Y. F. Xiao(肖运锋) 128 (IBSC); Qingyang(青阳), An(安) 5913 (PE); Liuan(六安), PE 1132863 (PE); Huoshan(霍山), E China Exped. (华东工作站) 6614 (IBSC); Jinzhai(金寨), Y. F. Xiao(肖运锋) 255 (IBSC). **Chongqing**(重庆): Fengjie(奉节), M. Y. Fang(方明渊) 24903 (PE); Wushan(巫山), T. P. Wang(王作宾) 10469 (PE); Chengkou(城口), T. L. Dai(戴天伦) 104671 (PE); Wuxi(巫溪), G. H. Yang(杨光辉) 58378 (PE); Pengshui(彭水), Biaoben Exped. (标本组) 886 (IMC); Qianjiang(黔江), Biaoben Exped. 532 (IMC); Shizhu(石柱), Biaoben Exped. 122 (IMC); Nanchuan(南川), T. X. Tan(谭士贤) 140 (PE). **Fujian**(福建): Yongtai(永泰), Y. Lin(林英) s. n. (PE); Sanming(三明), P. C. Tsoong(钟补求) 607 (PE); Yong'an(永安), Fujian Exped. 5604 (IBSC); Taining(泰宁), K. D. Ye(叶国栋) 2143 (PE); Jianning(建宁), Z. Y. Li(李振宇) 733 (PE); Shaxian(沙县), L. K. Lin(林来官) 409 (PE); Yongchun(永春), Zhisi(植四) 21680 (N); Nanping(南平), G. S. He(何国生) 1775 (PE); Wuyishan(武夷山), G. X. Liu(刘国兴) 234 (PE); Chongan(崇安), Wuyishan Exped. 2247 (IBSC); Shaowu(邵武), H. C. Chou(周鹤昌) 6147 (IBSC); Changting(长汀), C. M. Hu(胡启明) 3699 (LBG); Wuping(武平), H. B. Chen(陈恒彬) 664 (PE); Fuding(福鼎), L. K. Lin 1389 (PE). **Gansu**(甘肃): Tianshui(天水), Z. W. Zhang(张珍万) 42 (PE); Minxian(岷县), Huanghe Exped. (黄河队) 3118 (PE); Pingliang(平凉), T. P. Wang 13377 (PE); Huixian(徽县), Q. R. Wang *et al.* (王庆瑞等) 11509 (PE); Wenxian(文县), X. C. Zhao *et al.* (赵兴存等) 2494 (PE); Lixian(礼县), Y. F. Wang 910060 (PE); Zhouqu(舟曲), Y. J. Zhang(张耀甲) 820281 (IBSC); Kangxian(康县), Y. S. Lian *et al.* (廉永善等) 95046 (PE); Lintan(临潭), Y. F. Wang(王一峰) 94428 (PE). **Guangdong**(广东): Ruyuan(乳源), S. P. Ko(郭素白) 52691, 52919 (IBSC); Lechang(乐昌), C. L. Tso(左景烈) 20374 (IBSC, PE); Wengyuan(翁源), S. K. Lau(刘心祈) 1993 (SYS); Qujiang(曲江), S. S. Sin(辛树帜) 9436 (IBSC, SYS); Shixing(始兴), S. L. Zhang(张常路) 54872 (CANT); Heyuan(河源), W. T. Tsang(曾怀德) 28783 (G, IBSC);

Heping (和平), G. C. Zhang (张桂才) 28 (IBSC); Jiaoling (蕉岭), L. Deng 4679 (PE); Pingyuan (平远), L. Deng (邓良) 4173 (PE); Wuhua (五华), Y. J. Wang (王勇进) 59369 (CANT); Meixian (梅县), W. T. Tsang 21423 (BM, M, IBSC, P, PE, SYS, Z); Longmen (龙门), G. C. Zhang 5 (IBSC); Gaozhou (高州), S. S. Sin 21317 (IBSC); Lianxian (连县), Nanling Exped. (南岭队) 32 (IBSC); Yingde (英德), W. Y. Chun (陈焕镛) 7167 (IBSC); Yangshan (阳山), L. Deng 1260 (IBSC); Liannan (连南), L. Huang (黄立) 60979 (IBSC); Conghua (从化), B. H. Liang *et al.* (梁宝汉等) 70711 (CANT). **Guangxi** (广西): Lingui (临桂), Z. Z. Chen (陈照宙) 50974 (IBK); Xingan (兴安), C. H. Tsoong (钟济新) 81740 (PE); Quanzhou (全州), W. T. Tsang 27693 (SYS, US), C. H. Tsoong 82002 (IBSC); Longsheng (龙胜), Q. H. Lu (吕清华) 20249 (IBK); Ziyuan (资源), Z. Z. Chen 52089 (IBSC); Pingnan (平南), S. S. Sin 8221 (IBSC); Jinxiu (金秀), Y. K. Li 400525 (IBK); Rongshui (融水), Q. H. Lu 2540 (PE); Hexian (贺县), I. P. Tao (陶一鹏) 67678 (GXMI); Lingle (凌乐), C. Wang (黄志) 43217 (PE); Duan (都安), Y. K. Li (李荫昆) 701753 (PE); Nandan (南丹), Nandan Exped. 4-5-194A (GXMI); Tiane (天峨), Tiane Exped. 4-6-042 (GXMI); Luocheng (罗城), S. H. Chun (陈少卿) 14953 (IBSC). **Guizhou** (贵州): Qingzhen (清镇), S. W. Deng (邓世纬) 90255 (IBSC); Shuicheng (水城), R. B. Jiang (姜如碧) 606 (IBSC); Tongren (铜仁), Wulingshan Exped. (武陵山队) 1537 (PE); Jiangkou (江口), Z. S. Zhang *et al.* 400015 (IBSC); Dejiang (德江), N Guizhou Exped. 2794 (PE); Yingjiang (印江), Z. S. Zhang *et al.* (张志松等) 401450 (IBSC); Fanjingshan (梵净山), N Guizhou Exped. 443 (PE); Shiqian (石阡), Wulingshan Exped. 1976 (PE); Yanhe (沿河), Y. L. Cao (曹亚玲) 2824 (PE); Bijie (毕节), P. H. Yu (禹平华) 517 (PE); Jinsha (金沙), Guizhou Agr. Coll. Exped. (贵州农院队) 11 (IBSC); Xingren (兴仁), Guizhou Exped. 8287 (PE); Wangmo (望漠), R. B. Jiang 873 (IBSC); Anlong (安龙), Guizhou Exped. 2858 (PE); Kaili (凯里), S Guizhou Exped. 939 (PE); Liping (黎平), Y. K. Li (李永康) 8653 (IBSC); Leishan (雷山), C. P. Tsien *et al.* (简焯坡等) 51317 (PE); Shibing (施秉), Wulingshan Exped. 3537 (PE); Rongjiang (榕江), C. Z. Dang *et al.* (党成忠等) 51446 (PE); Dushan (独山), Libo Exped. (荔波队) 1248 (PE). **Henan** (河南): Linxian (林县), Pucha Exped. 1182 (PE); Weishi (蔚氏), PE 2349 (IBSC); Yichuan (奕川), Pucha Exped. (普查队) 20157 (PE); Yiyang (宜阳), Pucha Exped. 1235 (PE); Songxian (嵩县), T. L. Dai (戴天伦) 2243 (PE); Lushi (卢氏), K. M. Liou (刘克孟) 4396 (BJFC); Lingbao (灵宝), Fujingqiu (傅竞秋) 105 (IBSC); Neixiang (内乡), D. E. Boufford *et al.* 26097 (PE); Xixia (西峡), Z. X. Hu (胡志新) 199 (IBSC); Xinyang (信阳), X. Q. Zhang (张祥卿) 20227 (PE); Shangcheng (商城), Pucha Exped. 10089 (PE); Xingxian (新县), C. R. Sun (孙成仁) 2 (IBSC). **Hubei** (湖北): Yangxing (阳新), Q. Y. Wang (王泉英) 63 (IBSC); Nanzhang (南漳), G. F. Yang (杨官发) 508 (IBSC); Fangxian (房县), K. M. Liou 9242 (PE); Xingshan (兴山), H. J. Li 287 (PE); Suixian (随县), R. X. Huang (黄仁煊) 2873 (IBSC); Shennongjia (神农架), Shennongjia Exped. 25234 (PE); Lichuan (利川), W. B. Lin (林文豹) 357 (PE); Hefeng (鹤峰), F. S. Peng (彭辅松) 4 (PE); Laifeng (来凤), H. J. Li 7420 (PE); Badong (巴东), E. H. Wilson 313 (B, E, HBG, US); Jianshi (建始), L.

Y. Dai *et al.* (戴伦膺等) 552 (PE); Xuanen (宣恩), H. J. Li (李洪钧) 3123 (PE); Jianshi (建始), J. H. Xiang (向极航) 315 (IBSC). **Hunan** (湖南): Sangzhi (桑植), Q. Lin (林祁) 82 (IBSC); Dayong (大庸), T. R. Cao (曹铁如) 84434 (BJFC); Longshan (龙山), B. M. Yang (杨保民) 2070 (HNNU); Shimen (石门), L. H. Liu (刘林翰) 17948 (HNNU); Fenghuang (凤凰), Wulingshan Exped. 1036 (IBSC); Yuanling (沅陵), Z. H. Shen (沈中翰) 89 (IBSC); Yongshun (永顺), X. G. Li (李学根) 204563 (IBSC); Cili (慈利), X. G. Li 203931 (IBSC); Mayang (麻阳), X. G. Li 203566 (IBSC); Dongkou (洞口), P. C. Tam (谭沛祥) 62878 (IBSC); Linwu (临武), B. H. Liang 33442 (PE); Xupu (溆浦), Xupu Bur. For. (溆浦林业局) Lan-14 (兰-14) (CSFI); Dongan (东安), B. G. Li (李丙贵) 763197 (HNNU); Xinghua (新化), C. M. Zhang (张灿明) 86016 (HUIF); Xinghuang (新晃), Hunan Acad. Trad. Chin. Med. Pharm. Exped. (湖南中医所队) 428150 (IBSC); Qianyang (黔阳), X. G. Li 202842 (IBSC); Suining (绥宁), M. J. Lin (林睦就) 250 (CSFI); Chengbu (城步), Q. Z. Lin 54149 (CSFI); Xingning (新宁), P. C. Tam 63607 (IBSC); Tongdao (通道), K. M. Liu (刘克明) 32843 (BJFC); Daoxian (道县), Q. Z. Lin (林亲众) 249 (IBSC); Yizhang (宜章), G. Z. He (何观洲) 4799 (IBSC); Linxiang (临湘), PE 1117586 (PE); Liuyang (浏阳), C. J. Qi (祁承经) 6766 (IBSC); Nanyue (南岳), Q. Lin 975 (PE); Yanling (炎陵), K. W. Liu (刘克旺) 33852 (CSFI). **Jiangsu** (江苏): Yixing (宜兴), S. H. Mao *et al.* (毛少华等) 170 (NAS). **Jiangxi** (江西): Huliang (浮梁), Q. H. Li 870 (LBG); Lianhua (莲花), Y. Tsiang (蒋英) 10679 (IBSC); Jiujiang (九江), C. M. Tan (谭策铭) 93165 (SYS); Lushan (庐山), Y. Zhou (周仪) 146 (BNU); Yongxiu (永修), S. S. Lai 2262 (PE); Xiushui (修水), J. Xiong 5616 (LBG); Ruichang (瑞昌), C. Chen *et al.* (陈策等) 1930 (LBG); Chongyi (崇义), M. X. Nie (聂敏祥) 87089 (IBSC); Dingnan (定南), C. M. Hu 1817 (PE); Shicheng (石城), C. M. Hu 4466 (PE); Ruijing (瑞金), C. M. Hu 3857 (IBSC); Dayu (大余), J. S. Yue *et al.* (岳俊三等) 1126 (PE); Quannan (全南), J. Xiong (熊杰) 656 (PE); Xunwu (寻乌), Jiangxi Univ. Exped. (江西师院队) 1125 (IBSC); Xingguo (兴国), Xingguo Exped. 40 (LBG); Shangyou (上犹), M. X. Nie (聂敏祥) 8074 (IBSC); Longnan (龙南), 236 Exped. (236任务组) 893 (PE); Qiannan (虔南), S. K. Lau (刘心祈) 4027 (BM, IBSC, US); Yanshan (铅山), S. S. Lai 4231 (LBG); Dexing (德兴), X. X. Yang (杨祥学) 17205 (IBSC); Fengcheng (丰城), Y. Tsiang (蒋英) 10362 (IBSC); Tonggu (铜鼓), S. S. Lai *et al.* (赖书绅等) 906 (PE); Yifeng (宜丰), s. coll. 4097 (LBG); Jing'an (靖安), C. M. Tan 97783 (PE); Lichuan (黎川), S. S. Lai 2947 (IBSC); Lefeng (乐丰), Q. H. Li *et al.* (李启和等) 1325 (PE); Yongxing (永新), S. S. Lai 1196 (LBG); Anfu (安福), Y. G. Xiong (熊耀国) 7866 (LBG); Taihe (泰和), S. S. Lai 540 (PE); Jian (吉安), PE 987768 (PE); Yongfeng (永丰), s. coll. 84-1392 (IBSC); Jinggangshan (井冈山), J. S. Yu *et al.* 5114 (PE). **Ningxia** (宁夏): Xiji (西吉), T. P. Wang 14644 (PE). **Shanxi** (山西): Yuanqu (垣曲), T. W. Liu (刘天慰) 531 (PE); Ruicheng (芮城), S. Y. Bao 802 (PE); Xiaxian (夏县), T. W. Liu 378; Yuncheng (运城), Huanghe Exped. 380 (PE); Yicheng (翼城), Huanghe Exped. 72 (PE); Xiangning (乡宁), X. Y. Liu (刘心源) 20768 (PE); Qinshui (沁水), T. W. Liu 516 (PE); Lingchuan

(凌川), Y. Hong (红英) 1306 (PE); Jingcheng (晋城), S. Y. Bao (包士英) 1406 (PE). **Shaanxi** (陕西): Zhouzhi (周至), S. T. Wang 453 (PE); Chang'an (长安), Huanghe Exped. 10 (PE); Fengxian (凤县), Z. Y. Zhang 22 (IBSC); Taibai (太白), P. C. Tsoong 112 (PE); Huayin (华阴), C. H. Wang 28 (PE); Mianxian (勉县), S. Jiang *et al.* (姜恕等) 204 (PE); Foping (佛坪), X. M. Zhang 364 (IBSC); Yangxian (洋县), P. C. Tsoong 3409 (PE); Nanzheng (南郑), J. W. Wang (汪劲武) 235 (PE); Liuba (留坝), J. W. Wang 315 (PE); Danfeng (丹凤), P. C. Kuo 3768 (IBSC); Shangnan (商南), P. C. Kuo (郭本兆) 4041 (IBSC); Shanyang (山阳), Z. Y. Zhang (张志英) 15780 (PE); Shangxian (商县), S. B. He (何善宝) 592 (IBSC); Ningshan (宁陕), J. Q. Xing (邢吉庆) 2524 (IBSC); Shiquan (石泉), J. Q. Xing 936 (IBSC); Ankang (安康), C. R. Sun 9 (IBSC); Pingli (平利), s. coll. 10407 (PE). **Sichuan** (四川): Meigu (美姑), Vegetation Exped. (植被组) 13526 (PE); Yuexi (越西), H. C. Wang (王汉臣) 4059 (PE); Ganluo (甘洛), Sichuan Econ. Pl. Exped. (川经植) 4017 (PE); Butuo (布拖), s. coll. 5866 (PE); Mianning (冕宁), S. G. Wu (武素功) 1913 (PE); Jinyang (金阳), s. coll. 3063 (PE); Muli (木里), T. T. Yu 14506 (PE); Jiulong (九龙), Sichuan Econ. Pl. Exped. 7557 (PE); Kangding (康定), W. Sichuan Exped. (川西队) 1478 (PE); Wenchuan (汶川), F. T. Wang 21043 (PE); Maowen (茂汶), PE 1246971 (PE); Lixian (理县), S. X. Li (李书馨) 46819; Wanyuan (万源), P. Y. Li 6183 (PE); Yunlian (筠连), Sichuan Econ. Pl. Exped. 62 (PE); Emei (峨眉), G. H. Yang 56707 (PE); Baoping (宝兴), T. H. Tu 4918 (PE); Shimian (石棉), C. J. Xie (谢朝俊) 40893 (PE); Mabian (马边), F. T. Wang 23026 (PE); Leibo (雷波), T. T. Yu 4066 (PE); Luding (泸定), Z. G. Liu (刘照光) 21952 (IBSC); Pingwu (平武), W. C. Cheng (郑万钧) 962 (PE); Guanxian (灌县), W. P. Fang (方文培) 2238 (PE); Tianquan (天全), P. Y. Li (李培元) 6075 (PE). **Taiwan** (台湾): Taoyuan (桃园), T. Y. Chiang 1283 (TAI); Xinchu (新竹), C. I. Peng *et al.* 14811 (PE); Yilan (宜兰), T. C. Huang 7838 (RSA); Miaoli (苗栗), J. C. Wang & K. C. Yang 4873 (TAI); Taizhong (台中), Ou & Kao 9322 (Z); Nantou (南投), C. C. Chen 4220 (CAS); Alishan (阿里山), J. L. Gressitt 190 (BM); Hualian (花莲), Liu, Chen & Kao 257 (PH); Pingdong (屏东), K. Y. Wang *et al.* 947 (CAS); Kaohsiung (高雄), T. Y. Liu *et al.* 467 (E). **Yunnan** (云南): Kunming (昆明), T. T. Yu 8511 (PE); Dongchuan (东川), S. B. Lan (蓝顺彬) 171 (PE); Luquan (禄劝), P. I. Mao (毛品一) 1608 (PE); Songming (嵩明), Y. P. Chang (张英伯) 129 (PE); Xundian (寻甸), Y. P. Chang 905 (IBSC); Yuxi (玉溪), J. F. Rock 8933 (UC, US); Yiliang (彝良), NE Yunnan Exped. 760 (PE); Zhenkang (镇康), C. W. Wang 72496 (PE); Fengqing (凤庆), T. T. Yu 16148 (PE); Lincang (临沧), J. S. Xin 314 (IBSC); Lijiang (丽江), R. C. Ching 20644 (PE); Yongsheng (永胜), Linxing Exped. (林型组) 261 (PE); Wenshan (文山), K. M. Feng (冯国楣) 22455 (IBSC); Funing (富宁), C. W. Wang (王启无) 89048 (PE); Jinping (金平), Q. Huang (黄全) 426 (CAF); Pingbian (屏边), H. T. Tsai (蔡希陶) 55161, 55493, 60136 (PE, IBSC); Jianshui (建水), H. T. Tsai 53052 (IBSC); Hekou (河口), W. X. Liu (刘伟心) 526 (PE); Wuding (武定), J. S. Xin (辛景三) 95 (PE); Yangbi (漾濞), R. C. Ching (秦仁昌) 22573 (PE); Yunlong (云龙), W.

H. Li *et al.* (李文华等) 287 (PE); Eryuan (洱源), Y. H. Li (李延辉) 8557 (IBSC); Binchuan (宾川), H. T. Tsai 52919 (IBSC); Heqing (鹤庆), R. C. Ching 23564 (PE); Dali (大理), C. W. Wang 63435 (PE); Gongshan (贡山), T. T. Yu 23142 (PE); Fugong (福贡), Qinghai-Xizang Exped. (青藏队) 7086 (PE); Lanping (兰坪), H. T. Tsai 53742, 54053 (IBSC, PE); Lushui (泸水), Hengduanshan Exped. (横断山队) 99 (PE); Zhongdian (中甸), Z. L. Wu (吴中伦) 40236 (CAF); Weixi (维西), H. T. Tsai 57875, 59522, 59827, 59926, 63107 (IBSC); Degen (德钦), K. M. Feng 5671 (PE); s. loc. (采集地不详), Ducloux 585, 2588 (P), H. T. Tsai 57316, 57585A (IBSC). **Xizang** (西藏): Gyirong (吉隆), Z. C. Ni *et al.* 2175 (PE); Medog (墨脱), B. S. Li & S. Z. Cheng (李渤生, 程树志) 5034 (PE); Bomi (波密), Z. C. Ni *et al.* (倪志诚等) 1356 (PE); Zaya (察隅), Z. C. Ni *et al.* 725 (PE). **Zhejiang** (浙江): Hangzhou (杭州), PE 68447 (PE); Jiande (建德), J. Zhao *et al.* (赵坚等) 8524229 (PE); Changhua (昌化), Y. L. Keng 601 (UC); Chunan (淳安), Zhejiang Exped. 27769 (PE); Linan (临安), Zhejiang Exped. 29392 (PE); Fenghua (奉化), Y. Y. Ho 1448 (PE); Taishun (泰顺), S. R. Zhang 3624 (IBSC); Pingyang (平阳), S. R. Zhang 5891 (PE); Ruian (瑞安), S. R. Zhang 5468 (PE); Anji (安吉), M. P. Deng *et al.* (邓懋彬等) 975146 (PE); Zhuji (诸暨), S. Chen (陈诗) 293 (PE); Kaihua (开化), Zhejiang Exped. 30028 (IBSC); Tiantai (天台), H. H. Hu 1584 (PE); Xianju (仙居), R. C. Ching 1781 (IBSC); Yunhe (云和), K. K. Tsoong (钟观光) 410 (PE); Jingning (景宁), S. R. Zhang (章绍尧) 5207 (PE); Longqian (龙泉), S. R. Zhang 4696 (PE); Suichang (遂昌), Zhejiang Exped. 26241 (PE); Qingyuan (庆元), S. R. Zhang 3462 (PE); Lishui (丽水), S. R. Zhang 6470 (PE).

India (印度). Assam, Khasi & Jaintia Hills District, Shillong, C. B. Clarke 38603D (US); Mawphlang, Khasi Hills, T. R. Chand 7639 (L); Cherrapunjee, W. N. Koelz 30079 (L).

Indonesia (印度尼西亚). s. loc., H. F. Sun (孙洪范) 508 (IBSC); Java, Mt. Burangrang, Blume 1422 (L); Preanger, Koorders 26392B (B); Kamodjan, C. Holstvoogd 611 (L); Sumatra, Korthals s. n. (L).

Myanmar (缅甸). Sagaing, Katha District, Mogok, F. G. Dickason 5016 (photo, IBSC); Mt. Victoria, R. E. Cooper 5958A (UC).

Nepal (尼泊尔). N. Wallich s. n. (B); G. Dawson 534 (BM); Arun Valley, J. D. A. Stainton 432 (BM); Hunrsum, J. D. A. Stainton *et al.* 4271 (BM); Pakhapani, J. D. A. Stainton *et al.* 2821 (BM).

Sikkim (锡金). S. Kurz s. n. (L).

Sri Lanka (斯里兰卡). C. Walker s. n. (G).

Thailand (泰国). Phitsanulok, Phu Miang, T. Shimizu *et al.* 11623 (SING).

Vietnam (越南). Kon Tum, Dak Gley, L. Averyanov *et al.* 1805 (P).

多年来,我们通过野外调查和查阅大量标本得知:东亚五味子是本属中分布最广的植物,各器官性状变异幅度较大,其主要特征为:落叶性木质藤本,全株无毛;枝条圆柱形。叶片卵状椭圆形、卵形、圆形至倒卵形,长3~15 cm,宽2~8 cm;叶柄长5~45 mm。花黄色至淡黄色,单生叶腋,单性,罕杂性;花被片5~13枚;雄蕊7~40枚,花药内侧向或内向

开裂;心皮 14~56 枚。聚合果长 4~17 cm,果梗长 2~7 cm;成熟小浆果红色,近球形或椭圆形。种子肾球形或肾状椭圆形;种皮近光滑、有皱纹或瘤状小凸起。

在本种分布区中心的植株代表了本种最典型的特征,其花各部的数目较多,而从分布区中心向周边地区分布的植株则叶片和叶柄的长度、花各部的数目、种皮的光滑度等性状逐渐发生变化,但其变异幅度仍与分布区中心的基本重叠或大部重叠,没有截然的差异。

在分布区中心地区,即华中地区和中南地区西部(含 *S. sphenanthera* 的模式产地)的植株其叶片卵状椭圆形、卵形至倒卵形,通常长 5~12 cm,叶柄通常长 15~30 mm,中脉及侧脉在叶面近平坦至稍凸起,在叶背凸起;花被片通常 6~9 枚,最大花被片长 5~11 mm,雄蕊通常 12~25 枚,心皮通常 20~50 枚;种皮近光滑、有皱纹或小凸起(巴东,傅国勋、张志松 829,3 份,PE)。我们在野外调查时,发现在同一居群中既有雌雄异株的植株,又有雌雄同株(先开雄花,后开雌花)的植株,甚至个别植株为杂性花(雌花、雄花与两性花同株)(林祁 975),而花被片数目(7~9 枚)、雄蕊数目(12~25 枚)和心皮数目(15~45 枚)则变化而不定,种皮近光滑或有小凸起(林祁 988,990,PE)。

在分布区西南部(印度尼西亚,即 *S. elongata* 的模式产地)、西北部(缅甸)、东南部至东部[中国:广西东部、广东(即 *S. viridis* 的模式产地)、福建、浙江、台湾(即 *S. arisanensis* 的模式产地)]的植株,其叶和花均较大,叶常呈卵形或近圆形,叶片通常长 5~12 cm,叶柄通常长 15~30 mm,花被片通常为 5~10 枚,最大花被片长 5~12 mm,雄蕊通常为 10~30 枚(印度尼西亚的标本亦如此),心皮通常为 25~45 枚(台湾的标本亦如此,如 C. I. Peng *et al.* 14811),种皮呈现小凸起或皱纹的渐多。

在分布区的北部(中国:甘肃、陕西等地),本种的叶多呈倒卵形,但其它性状仍与分布区中心的植株基本一致。

在分布区的中南部[越南北部、中国云南东南部(即 *S. micrantha* 的模式产地)和广西西部],其叶(长 3~8 cm,宽 2~4 cm)和花(最大花被片长 4~8 mm)逐渐小型化,但叶片仍呈卵形或近圆形,花各部的结构与数目仍在正常变化幅度范围之内,这可能是对本地区石灰岩山地及碱性土壤(不保水、缺肥、土壤 pH 值较高)环境的适应性变异。

从以上我们的工作可以看出,前人是在野外调查和查阅标本量不够,统计数字不全的情况下,在本种的分布区内,从四周和中央分别取极端代表植株为模式而发表了不同的名称,其实是同种植物。该种的正确名称应该是 *S. elongata*,其它名称则为其异名。

在花药内侧向或内向开裂的几个种中,本种以枝条圆柱形,叶冬季脱落,无毛,叶片卵状椭圆形、卵形、圆形,稀至倒卵形而可与其它种相区别。

2 翼梗五味子(中国高等植物图鉴)

Schisandra henryi Clarke in Gard. Chron. III. 38: 162, f. 55. 1905. TYPE: China. Yunnan, Yuanyang, A. Henry 9193b (lectotype, K; isoelectotype, A).

S. elongata (Bl.) Baill. var. *longissima* Durn in Journ. Linn. Soc. Bot. 38: 354. 1908. TYPE: China. Yunnan, Yuanyang, A. Henry 9193b (lectotype, K; isoelectotype, A).

S. hypoglauca Levl. in Repert. Sp. Nov. 9: 459. 1911. TYPE: China. Guizhou, H. J. Esquirol 58 (holotype, E!; isotypes, A, K).

S. perulata Gagnep. in Suppl. Fl. Gen. Indo-Chine 1: 55, f. 6: 3~4. 1938, syn. nov.

TYPE: Vietnam. Tonkin, Cha Pa, A. Petelot 4788 [lectotype, P (fl.); isoelectotypes, NY, P (fr.)!].

S. henryi Clarke var. *marginalis* A. C. Smith in Sargentia 7: 115, f. 19. 1947. — *S. henryi* Clarke subsp. *marginalis* (A. C. Smith) R. M. K. Saunders in Syst. Bot. Monogr. 58: 90. 2000, syn. nov. TYPE: China. Zhejiang, Xianju, R. C. Ching 1606 (holotype, A, photo, IBSC!; isotypes, E! IBSC! UC! US!).

S. henryi Clarke var. *yunnanensis* A. C. Smith in Sargentia 7: 116. 1947, syn. nov. — *S. henryi* Clarke subsp. *yunnanensis* (A. C. Smith) R. M. K. Saunders in Syst. Bot. Monogr. 58: 89. 2000, syn. nov. TYPE: China. Yunnan, Simao, A. Henry 12022 (holotype, A, photo, IBSC!; isotypes, NY, US!).

S. wilsoniana A. C. Smith in Sargentia 7: 122, f. 17: h-k. 1947, syn. nov. TYPE: China. Yunnan, Heqing, J. F. Rock 4039 (holotype, A, photo, IBSC!; isotypes, UC! US!).

产中国、泰国和越南,生于海拔 500~2500 m 的山地沟谷、山坡林下或灌丛中。

China(中国). **Anhui**(安徽): Xixian (歙县), M. B. Deng 4660 (PE). **Chongqing**(重庆): Fengjie, M. Y. Fang 24278 (PE); Chengkou, E. H. Wilson 4722 (IBSC); Nanchuan, W. P. Fang 1116 (PE); Wulong (武隆), Z. Y. Liu (刘正宇) 970947 (IMC); Jiangjing (江津), Sichuan Econ. Pl. Exped. 453 (SM); Xiushan (秀山), Biaoben Exped. 879 (IMC); Shizhu, Biaoben Exped. 460 (IMC); Pengshui, Biaoben Exped. 501 (IMC); Qianjiang, Biaoben Exped. 260 (IMC). **Fujian**(福建): Taining, Z. Y. Li 10761 (PE); Nanping, K. S. He 1075 (PE); Shunchang (顺昌), M. S. Li *et al.* (李明生等) 5811 (PE); Wuyishan, Wuyishan Exped. 80-0243 (IBSC); Longyan (龙岩), H. B. Chen (陈恒彬) 473 (PE); Shanghang (上杭), L. K. Lin 7405 (PE); Changding, Y. Ling 5399 (PE); Tuorong (拓荣), L. K. Lin 1363 (PE); Gutian (古田), L. K. Lin 1418 (PE). **Guangdong**(广东): Ruyuan, S. K. Lau 28955 (IBSC); Lian-nan, Z. S. Zhu (朱志淞) 60688 (CAF); Nanxiong (南雄), L. Deng 6171 (PE); Gaozhou (高州), S. S. Sin 23194 (IBSC); Lechang, Nanling Exped. (南岭队) 2512 (IBSC); Shixing, L. Deng 6775 (PE); Xingyi (信宜), S. P. Ko (高锡朋) 51301 (PE); Yangshan (阳山), L. Deng 122 (PE); Lianxian, S. Q. Tang *et al.* (唐绍清等) 440 (SYS); Lianshan (连山), Nanling Exped. 528 (IBSC). **Guangxi**(广西): Ziyuan, R. X. Zhao (赵瑞先) 144 (IBK); Xingan, C. H. Tsoong 83594 (IBK); Lingui, C. F. Liang 30610 (IBSC); Quianxian, D. A. Huang (黄德爱) 60810 (IBSC); Longsheng, S. F. Yuan & L. F. Liu (袁淑芬、刘兰芳) 5301 (IBSC); Pingnan, C. Wang 39328 (IBSC, PE); Damingshan (大明山), C. X. Cai (蔡灿星) 5156 (IBSC); Rongshui, R. R. Yang *et al.* (杨日升等) 53-49 (GXMI); Jinxiu, W. Y. Chun 9019 (IBSC); Hexian, Y. P. Tao 67676 (GXMI); Tianlin (田林), C. Z. Gao *et al.* (高成芝等) 26528 (GXMI); Xiling (西林), G. B. Zhu (朱贵保) 3-38222 (GXMI); Napo (那坡), C. C. Chang (张肇骞) 14136 (IBSC); Lingyun (凌云), S. K. Lau 28461 (IBSC); Lingle, C. F. Liang 33162 (PE); Longling (隆林), Z. A. Zhou (周志安) 3-34087 (GXMI); Nandan, Nandan Exped. 4-5-238 (GXMI); Tiane, Tiane Exped. 4-6-22 (GXMI); Luocheng, R. C. Ching 6236 (PE, UC, US). **Guizhou**(贵州): Qingzhen, C. Y. Chiao 132 (PE); Zunyi (遵义), Sichuan-Guizhou Exped. 1051

(PE); Tongzi (桐梓), Y. Tsiang 5088B (IBSC); Daozhen (道真), K. M. Lan (蓝开敏) 86-569 (PE); Yingjiang, Z. S. Zhang *et al.* 401735 (IBSC); Songtao (松桃), Wulingshan Exped. 84 (PE); Shiqian, Wulingshan Exped. 1973 (PE); Bijie, P. H. Yu 424 (PE); Anshun (安顺), PE 1188089 (PE); Xingren, C. Z. Dang *et al.* 56 (PE); Anlong, Z. S. Zhang 2586 (IBSC); Zhenfeng (贞丰), Beijing Exped. (北京队) 267 (PE); Rongjiang, W. Zhang *et al.* (张维等) 51446 (PE); Liping (黎平), 86 Exped. (86 级) 477 (BJFC); Leishan, s. coll. 1974-484 (IBSC); Shibing, Wulingshan Exped. 3503 (PE); Luodian (罗甸), Z. S. Zhang (张志松) 425 (IBSC); Libo, Z. R. Xu (许兆然) L1494 (IBSC); Longli (龙里), Y. Tsiang 8422 (IBSC); s. loc., H. J. Esquirol 58 (E). **Henan**(河南): Xingxian, C. R. Sun 2 (IBSC); Shangcheng, PE 10089 (IBSC). **Hubei**(湖北): Shiyan (十堰), T. R. Ding (丁天仁) 408 (IBSC); Laifeng, H. J. Li 7613 (PE); Hexian (鹤县), F. S. Peng 168 (PE); Xuanen, H. J. Li 4771 (PE); Badong, Hubei Exped. 24166 (PE); Hefeng, F. S. Peng 449 (PE); Enshi (恩施), Y. J. Ma (马元俊) 290 (IBSC); Lichuan, W. C. Cheng *et al.* (郑万钧等) 1918 (PE); Jianshi, H. J. Li 4777 (IBSC). **Hunan**(湖南): Longshan, L. H. Liu 1711 (PE); Yuanling, Wulingshan Exped. 748 (IBSC); Dayong, X. G. Li 204680 (IBSC); Sangzhi, Q. Lin 801 (IBSC); Shimen, C. L. Long (龙成良) 87307 (CSFI); Cili, C. L. Peng (彭春良) 86171 (CSFI); Fenghuang, Y. G. Yang (杨一光) 3079 (HNNU); Yongshun (永顺), Beijing Exped. 572 (PE); Huayuan (花垣), Beijing Exped. 1809 (PE); Xingning, P. C. Tam 63608 (IBSC); Yongsui (永绥), Hunan Exped. 594 (PE); Qianyang, C. J. Qi 4084 (IBSC); Chengbu, P. C. Tam 63656 (IBSC); Xinghuang, Wulingshan Exped. 756 (IBSC); Dongkou, J. H. Zhao (赵建华) 87 (IBSC); Zhijiang (芷江), P. C. Tam 62490 (IBSC); Suining, Q. Z. Lin 15503 (CSFI); Tongdao, K. W. Liu 32843 (CSFI); Xinghua, C. M. Zhang 866074 (HUIF); Anjiang (安江), PE 334688 (PE); Wugang (武冈), P. C. Tsoong (钟补勤) 1251 (PE); Jianghua (江华), C. J. Qi 5092 (CSFI); Yizhang, Q. Z. Lin 84746 (SCFI); Pingjiang (平江), J. Xiong 6446 (LBG); Liuyang, J. G. Xiao (肖家庚) 5565 (CSFI); Nanyue, Q. Lin 989 (PE); Yanling, PE 1141961 (PE). **Jiangxi**(江西): Lianhua, s. coll. 1439 (PE); Guixi (贵溪), M. X. Nie *et al.* 3800 (LBG); Wuning (武宁), S. S. Lai 2557 (PE); Lushan, M. X. Nie 1727 (IBSC); Yongxiu, S. S. Lai 2320 (PE); Xunwu, s. coll. 1125 (PE); Dayu, J. S. Yue *et al.* 1214 (LBG); Shangyou, Jiangxi Exped. 87 (PE); Anyuan (安远), Y. Lin (林英) 14019 (PE); Ruijing, C. M. Hu 3857 (LBG); Chongyi, s. coll. 16046 (IBSC); Yanshan, H. Y. Zhou (邹惠喻) 20276 (BJFC); Yifeng, S. S. Lai *et al.* 45 (PE); Tonggu, J. Xiong 4420 (LBG); Jingan, J. H. Zhang (张吉华) 97029 (PE); Lichuan, M. J. Wang *et al.* (王名金等) 2238 (PE); Suichuan (遂川), s. coll. 669 (PE); Anfu, Jingxi Exped. 237 (PE); Yongxing, s. coll. 1196 (PE); Jingangshan, S. S. Lai *et al.* 3925 (LBG); Jian, PE 987761 (PE). **Sichuan**(四川): Gulin (古蔺), Sichuan Econ. Pl. Exped. 6 (SM); Cangxi (苍溪), 72N-669 (SM); Emei, T. N. Liou (刘慎谔) 1022 (IBSC); Pingshan (屏山), T. Tang 140 (PE); Yibing (宜宾), C. R. Su 105 (IBSC); Yunlian, M. F. Zhong *et al.* (钟明芳等) 820 (SM); Guangan (广安), 72N-215 (SM); Shimian, C. J. Xie 40116 (IBSC); Mianning, T. T. Yu 17763 (PE); Jinyang (金阳), Sino-Russia Exped. 2477 (PE). **Shaanxi**(陕西): Shanyang

(山阳), NW Univ. 4th Exped. (西北大学第四队) 10 (IBSC). **Yunnan**(云南): Songming, B. Y. Qiu (邱炳云) 55462 (PE); Simao (思茅), A. Henry 12022 [IBSC (photo), US]; Jingdong (景东), M. G. Li (李鸣岗) 827 (IBSC); Shangjiang (双江), J. S. Xin 855 (KUN); Lincang (临沧), J. S. Xin 314 (KUN); Lancang (澜沧), C. W. Wang 76484 (IBSC); Tengchong (腾冲), G. Forrest 7622 [CAS, BM, E (3), IBSC (2), PE]; Longling (龙陵), C. Y. Wu *et al.* (吴征镒等) 1213 (PE); Wenshan, K. M. Feng 22600 (IBSC); Malipo (麻栗坡), K. M. Feng 22938 (IBSC); Funing, C. W. Wang 88181 (IBSC); Xichou, K. M. Feng 11536 (PE); Jinping, P. I. Mao 396 (PE); Mengzi (蒙自), C. W. Wang 83416 (PE); Pingbian, H. T. Tsai 55101, 55188, 55192, 60058, 60191, 60230, 60462, 60658, 60597, 61106, 61561, 61689, 62241 (IBSC, PE); Jianshui, H. T. Tsai 53321 (IBSC); Hekou, W. X. Liu 628 (KUN); Luchun (绿春), Luchun Exped. 64 (PE); Yuanyang (元阳), S. C. He (何树春) 85134 (IBSC); Mengla (勐腊), Z. H. Tsi *et al.* (吉占和等) 144 (PE); Jinghong (景洪), Z. H. Tsi 373 (PE); Menghai (勐海), Y. H. Li 5004 (IBSC); Dali, R. C. Ching 22747 (PE); Heqing, J. F. Rock 4039 [IBSC (photo), UC, US]; Weishan (巍山), Y. Tsiang 12178 (IBSC); Yangbi, T. N. Liou 22722 (PE); Gongshan, Qinghai-Xizang Exped. (青藏队) 9363 (PE); Deqen, J. S. Yang (杨竞生) 84-1053 (IBSC); Weixi, W. C. Yang (杨万超) 89064 (IBSC); south of Red River, A. Henry 9193A (US). **Zhejiang**(浙江): Hangzhou, S. R. Zhang 3300 (IBSC); Changhua, X. Y. He (贺贤育) 30390 (IBSC); Linan, J. Y. Fang *et al.* (方金元等) L 8442260 (IBSC); Chunan, Zhejiang Exped. 30086 (PE); Shunxi (顺溪), Y. X. Shi (史永旭) 8441088 (CANT); Taishun, S. R. Zhang 3628 (IBSC); Ruian, S. R. Zhang 5468 (PE); Kaihua, J. X. Wang (王景祥) 2127 (PE); Tiantai, Zhejiang Exped. 28658 (PE); Xianju, R. C. Ching 1606 (IBSC, UC, US); Longqian, K. K. Tsoong 520 (PE); Qingyuan, R. C. Ching 2336 (US).

Thailand(泰国). Chiang Mai, Jawm Tong, Mae Soi Ridge, J. F. Maxwell 92-211 (CAS, P).

Vietnam(越南). Cha Pa, A. Petelot 4788 [P (2)].

本种叶背常灰白色或粉白色,但其性状不稳定。作者在南岳山和金佛山调查时,在同一根藤上,春季鲜叶叶背灰白色,但压干后则不呈现灰白色,秋季鲜叶叶背灰白色或粉白色,压干后叶背依旧为灰白色或粉白色。在野外调查采集和查阅标本中,我们还发现生长在温暖、荫湿环境中的本种植物,位于老藤下部枝条上的叶片往往比向阳处的正常叶片大,长可达 15 cm 左右,且含水份较多,叶片压干后呈透明状。

查阅 *S. henryi* var. *marginalis*, *S. henryi* var. *yunnanensis*, *S. perulata*, *S. wilsoniana* 的模式标本,全都有增大宿存的芽鳞;在 *S. henryi* var. *yunnanensis* 的同号标本(蔡希陶 53321)中,老叶叶背灰白色,而其它叶则不呈灰白色;在 *S. perulata* 的模式标本(A. Petelot 4788)上,其幼枝具纵向翅状棱;而 *S. wilsoniana* 的模式标本叶背明显灰白色。它们与 *S. henryi* 无异。

在花药内侧向或内向开裂的种类中,本种通常以幼枝具纵向翅状棱,芽鳞大而宿存至幼果期,叶冬季脱落,叶背灰白色、无毛而易于识别。

3 毛叶五味子(峨眉植物图志)

Schisandra pubescens Hemsl. & Wils. in Kew Bull. Misc. Inf. 1906: 150. 1906. TYPE: China. Hubei, Changyang, E. H. Wilson 2234 (lectotype, K; isolectotypes, A, B! E! NY, P!).

S. sphenanthera Rehd. & Wils. var. *pubinervis* Rehd. & Wils. in Sargent, Pl. Wils. 1: 415. 1913, syn. nov. — *S. pubescens* Hemsl. & Wils. var. *pubinervis* (Rehd. & Wils.) A. C. Smith in Sargentia 7: 119. 1947, syn. nov. — *S. pubinervis* (Rehd. & Wils.) R. M. K. Saunders in Syst. Bot. Monogr. 58: 81. 2000, syn. nov. TYPE: China. Sichuan, Xiaojin, E. H. Wilson 2551 (holotype, A, photo, IBSC!; isotypes, B! BM! E! HBG! K, US!).

S. vestita Pax & K. Hoffm. in Pax, Rep. Sp. Nov. Regni Veg. Beih. 12: 381. 1922. TYPE: China. Sichuan, Yaan, W. Limpricht 1572 (holotype, WRS!, photo, PE!).

S. sphenanthera Rehd. & Wils. var. *longipes* Merr. & Chun in Sunyatsenia 2: 5. 1934, syn. nov. — *S. henryi* Clarke var. *longipes* (Merr. & Chun) A. C. Smith in Sargentia 7: 115. 1947, syn. nov. — *S. longipes* (Merr. & Chun) R. M. K. Saunders in Syst. Bot. Monogr. 58: 90. 2000, syn. nov. TYPE: China. Guangdong, Lechang, C. L. Tso 20530 (lectotype, IBSC 25804, IBSC!; isolectotypes, NY, SYS!).

S. tomentella A. C. Smith in Sargentia 7: 119, f. 20. 1947, syn. nov. TYPE: China. Sichuan, Mabian, W. P. Fang 408 (holotype, A, photo, IBSC!; isotypes, CAS! E! FI! IBSC! K, NY, PE! US!).

产中国和越南(北部),生于海拔 400~2600 m 的山坡丛林中。

China(中国). **Chongqing**(重庆): Nanchuan, Q. Lin 984 (PE); Hechuan (合川), X. L. Sun (孙祥麟) 5510 (PE); Fengdu (丰都), Y. L. Cao (曹亚玲) 643 (PE). **Guangdong**(广东): Lechang, C. L. Tso 20530 [IBSC, SYS (2)], C. L. Tso 20679 (IBSC); Ruyuan, S. P. Ko 53043 (IBSC). **Guangxi**(广西): Lingui, L. H. Chun (陈立卿) 94963 (IBSC); Xingan, Guangxi Exped. 4292 (IBSC); Longsheng, H. F. Qin & Z. T. Li (覃灏富, 李中提) 70010 (IBSC). **Guizhou**(贵州): Daozhen, Z. Y. Liu 4210 (PE); Fanjingshan, P. C. Tsoong 1913 (PE); Hezhang (赫章), R. B. Jiang 563 (IBSC); Leishan, D. Zhang *et al.* (张德等) 50367 (PE). **Hubei**(湖北): Changyang (长阳), E. H. Wilson 2234 (B, E, P); Xingshan, A. Henry 5907 (US); Hefeng, H. J. Li 5784 (PE); Jianshi, L. Y. Dai *et al.* 1234 (PE); Lichuan, Z. C. Ye (叶之池) 524 (PE); Xuanen, H. J. Li 2584 (PE); Enshi, M. Y. Fang 24336 (PE). **Hunan**(湖南): Sangzhi, L. Q. Li (李良千) 14 (PE). **Sichuan**(四川): Liangshan (凉山), Sichuan Econ. Pl. Exped. 215 (PE); Kangding, S. Jiang 9917 (PE); Xiaojin (小金), E. H. Wilson 2551 [B, E, HGB, IBSC (photo), US]; Hongya (洪雅), W. P. Fang 8330 (PE); Yingjing (荣经), Q. S. Zhao (赵清盛) 1069 (PE); Yaan (雅安), W. Limpricht 1572 [PE (photo)]; Hanyuan (汉源), T. P. Wang 8744 (PE); Pingshan, Sichuan Econ. Pl. Exped. 1064 (PE); Yibin, C. R. Sun 14 (IBSC); Wenchuan, L. Q. Li 1392 (PE); Leibo, T. T. Yu 1065 (PE); Baoxing, X. S. Zhang (张秀实) 4844 (PE); Tianquan, G. H. Yang 55026 (PE); Ebian (峨边), W. C. Cheng 5987 (PE); Emei, W. P. Fang 7765 (PE); Mabian, W. P. Fang 408 [CAS, IBSC, PE (2), US], F. T. Wang 22845 (PE), 23052 [PE (2)], X. L. Sun 5822 (PE); Xuyong (叙永), M. F. Zhong *et al.* 36 (SM); Guanxian, W. P. Fang 2171 (IBSC, PE). **Yunnan**(云南): Sui-

jiang (绥江), B. S. Sun *et al.* (孙必兴等) 214 (IBSC); Daguan (大关), NE Yunnan Exped. 180 (PE); Luchun, D. D. Tao (陶德定) 323 (PE).

Vietnam(越南). Cha Pa, A. Petelot 4768 (P).

在花被片圆形、卵圆形或倒卵圆形的种类中,前人根据叶片被毛情况发表了几个种或种下分类单元。其中 *S. pubescens*, 其叶背被描述为全面被柔毛; *S. spheanthera* var. *pubinervis* 的模式为果标本,其叶背被描述为仅脉上被柔毛; *S. spheanthera* var. *longipes*, 描述其特征与 *S. spheanthera* var. *pubinervis* 相似,仅花梗较长(可达 10 cm)而不同; *S. tomentella* 的模式为花标本,描述其叶背全面被绒毛,且有的毛具分枝。

我们在四川调查时,发现在同一植株上,在同一年中的不同生长季节中,叶的毛被情况随之而变化。在春季幼叶期至花蕾期叶背全面被毛,毛短而密,呈绒毛状,此后逐渐伸长并脱落,毛被较稀疏,呈柔毛状;进入夏秋季节或果期后,毛被更稀少,常脱落至仅叶脉上被柔毛。查阅四川马边(*S. tomentella* 的模式产地)及其附近地区的标本,发现花标本叶背毛被较短而密,呈绒毛状,而果标本(孙祥麟 5822)则毛被较长而稀,呈柔毛状。查阅湖北长阳(*S. pubescens* 的模式产地)及其附近地区的标本,发现花标本叶背通常毛被较疏,呈柔毛状或绒毛状,而果标本(李洪钧 5784)则多为脱落至叶脉上残留有柔毛。查阅四川小金(*S. spheanthera* var. *pubinervis* 的模式产地)及其附近地区的标本,发现花标本(张秀实 4844)叶背除叶脉处外,其它部位亦可见柔毛,而果标本则只叶脉上残留有柔毛。查阅广东乐昌(*S. spheanthera* var. *longipes* 的模式产地)及其附近地区的标本,发现花标本通常只叶背脉上被柔毛,而果标本通常脱落至近无毛,但花蕾期标本仍可见叶背除叶脉处外,其它部位亦有毛(陈立卿 94963),而花梗的长度变化幅度为 4~8 (~10) cm。在各地的标本中,叶背所被的毛有分叉与不分叉的,并常在同一片叶中同时存在,而花梗通常长 3~7 cm。据此,我们认为上述名称实为同一种植物。

通过野外调查、询问产地群众和查阅大量标本,我们得知:该种植物在分布区西北部的居群,通常植株分布的海拔较高,叶背被毛较多,而东部、东南部和南部的居群,通常植株分布的海拔较低,叶背被毛较少,这是该植物从北至南、从西往东、从高海拔向低海拔分布时对不同温湿生态环境的适应性变异,不应划分成不同种植物。

本种以叶冬季脱落,叶背多少被毛,花药内向或内侧向开裂而极易与其它种区别。

4 大花五味子(中国树木志)

Schisandra grandiflora (Wall.) Hook. f. & Thoms. in Hook. f. Fl. Brit. Ind. 1: 44. 1872. — *Kadsura grandiflora* Wall. Tent. Fl. Nepal. 10. 10. tab. 14. 1824. TYPE: Nepal. Mt. Sheopore, N. Wallich 4985 (lectotype, K; isolectotypes, A, B! BM! C, G! GH, L! NY).

Schisandra chinensis (Turcz.) Baill. var. *rubriflora* Franch. in Nouv. Arch. Mus. Hist. Nat. Paris ser. 2, 8: 192. 1886, syn. nov. — *S. rubriflora* (Franch.) Rehd. & Wils. in Sargent, Pl. Wils. 1: 412. 1913, syn. nov. TYPE: China. Sichuan, Guanxian, E. H. Wilson 921b (holotype, A, photo, IBSC!).

S. glaucescens Diels in Bot. Jahrb. 29: 323. 1900, syn. nov. TYPE: China. Chongqing, Nanchuan, C. Bock & A. von Rosthorn 131 (holotype, O; isotype, B!).

S. grandiflora (Wall.) Hook. f. & Thoms. var. *cathayensis* Schneid. in Bot. Gaz. 63:

522. 1917, syn. nov. TYPE: China. Sichuan, Schneider 3936 (holotype, non vidi).

S. incarnata Stapf in Curtis's Bot. Mag. 152: sub. tab. 9146. 1928, syn. nov. TYPE: China. Hubei, E. H. Wilson 2085 (lectotype, K; isolectotypes, A, B! E! HBG! US!).

S. sphaerandra Stapf in Curtis's Bot. Mag. 152: sub. tab. 9146. 1928, syn. nov. TYPE: China. Yunnan, Lijiang, G. Forrest 5663 (lectotype, K; isolectotypes, BM! E! K, US!).

S. sphaerandra Stapf f. *pallida* A. C. Smith in Sargentia 7: 109. 1947, syn. nov. TYPE: China. Yunnan, Jingdong, J. F. Rock 8595 (holotype, A, photo, IBSC!; isotypes, B! NY, UC! US!).

S. flaccidiramosa C. R. Sun in Bull. Bot. Res. 8(1): 123, f. 1988, syn. nov. TYPE: China. Gansu, Dangchang, Z. X. Peng 730053 (holotype, LZU!).

产不丹、中国、印度、尼泊尔、缅甸、锡金和泰国,生于海拔 1000 ~ 3900 m 的山地沟谷或山坡林中及灌丛中。

Bhutan(不丹). Dochu La, B. Bartholomew 158 (BM); Paro, F. Ludlow & G. Sherriff 148 (BM); Rudo La, F. Ludlow *et al.* 18879 (BM); Sengor, R. Lyell s. n. (BM); Shabjetang, F. Ludlow *et al.* 19676 (BM).

China(中国). **Chongqing**(重庆): Chengkou, T. L. Dai 111555 (PE); Fengjie, Sichuan Univ. Exped. (川大队) 105236 (PE); Wuxi, K. L. Chu 2017 (PE); Wushan, G. H. Yang 58175 (PE); Nanchuan, Bock & von Rosthorn 131 (B). **Gansu**(甘肃): Dangchang (宕昌), Z. X. Peng(彭泽祥) 730053 (LZU). **Guizhou**(贵州): Daozhen, Z. Y. Liu 20458 (PE); Fanjingshan, PE 618139 (PE); Tongzi, Z. Y. Liu 20459 (PE). **Hubei**(湖北): Xingshan, E. H. Wilson 263 [BM, E, IBSC (photo), US]; Shennongjia, Shennongjia Exped. 30734 (PE); Jianshi, L. Y. Dai *et al.* 151 (PE); Enshi, Q. H. Liu (刘启宏) 780 (IBSC); Badong, C. M. Hu 737 (IBSC); Lichuan, Z. S. Zhang 1727 (PE); Xuanen, Y. M. Wang (王映明) 4879 (PE); W Hubei, E. H. Wilson 2085 (B, E, HBG, US). **Hunan**(湖南): Sangzhi, PE 1561839 (PE); Shimen, H. S. Liao(廖衡松) 15957 (CSFI). **Shaanxi**(陕西): Shanyang, J. X. Yang (杨金祥) 3134 (PE); Taibaishan, Taibaishan Exped. 56151 (PE). **Sichuan**(四川): Yuexi, T. T. Yu 949 (PE); Jinyang, Sichuan Econ. Pl. Exped. 3041 (PE); Meigu, s. coll. 1917 (SM); Dechang (德昌), SW Teach. Univ. 74th Exped. (西师 74 级) 11852 (PE); Puge (普格), Sichuan Econ. Pl. Exped. 5503 (SM); Butuo (布拖), Sichuan Econ. Pl. Exped. 5866 (PE); Yanyuan (盐源), Q. L. Zhang (张清龙) 30121 (IBSC); Leibo, C. T. Kuo 8613 (PE); Muli, PE 700293 (PE); Xichang (西昌), s. coll. 11065 (SM); Mianning, S. K. Wu 1733 (PE); Muli, T. T. Yu 5582 (PE); Luding (泸定), Sichuan Econ. Pl. Exped. 38 (SM); Kangding, W. G. Hu (胡文光) 37036 (PE); Jiulong, Z. G. Liu (刘照光) 4514 (PE); Xiaojin, Sichuan Econ. Pl. Exped. 285 (PE). Maoxian (茂县), Z. He 5148 (SM); Wenchuan, T. L. Dai 64-5 (SM); Lixian (理县), S. Jiang *et al.* 896 (PE); Heishui (黑水), S. S. Li (李书馨) 73378 (PE); Pingshan, T. T. Yu 3472 (PE); Maowen, Maowen Exped. 2712 (PE); Nanping (南坪), P. Q. Li (李沛琼) 200 (PE); Shimian, C. J. Xie 40116 (PE); Hongya, T. H. Tu 317 (PE); Mabian, W. P. Fang 1585 (IBSC); Baoxing, Z. P. Song (宋滋圃) 38363 (IBSC); Tianquan, W. P. Fang 1585 (IBSC);

Hanyuan (汉源), Z. Y. Liu 523 (PE); Pingwu (平武), X. L. Jiang 10059 (PE); Emei, T. T. Yu 864 (PE); Ebian, C. W. Yao (姚仲吾) 2428; Qingchuan (青川), s. coll. 2094 (SM); Yanbian (盐边), Sichuan Econ. Pl. Exped. 623 (SM); Nanchong (南充), T. T. Yu 1983 (PE); Miyi (米易), Z. He *et al.* (何铸等) 11065 (SM); Guanxian, E. H. Wilson 921b [IBSC (photo)], E. H. Wilson 921 (B, BM, E, HBG, US). **Yunnan** (云南): Songming, T. T. Yu 15796 (PE); Luquan, P. I. Mao 888; Zhenkang, C. W. Wang 72496 (PE); Lijiang, G. Forrest 2122 [E, IBSC (photo)], G. Forrest 5663 (BM, US), Schneider 1276 (E), Schneider 3303 [IBSC (photo)]; Jingdong, J. F. Rock 8595 [B, IBSC (photo), UC, US]; Malipo, T. T. Yu 5582 (PE); Jinping, Sino-Russia Yunnan Exped. 1587 (PE); Luchun, Luchun Exped. 64 (PE); Eryuan, R. C. Ching 23188 (PE); Dali, G. Forrest 7181 (E, PE), E. E. Maire 3359 (Z); Heqing, R. C. Ching 23564 (PE); Yangbi, R. C. Ching 22573 (PE); Lushui, Hengduanshan Exped. 267 (PE); Gongshan, K. M. Feng 6923 (PE); Zhongdian, Kunming Exped. 23490 (PE); Weixi, C. W. Wang 172975 (PE); Deqen, T. T. Yu 19108 (IBSC); Qiujiang, T. T. Yu 19258 (PE). **Xizang** (西藏): Gyirong, Qinghai-Xizang Exped. 5118 (PE); Nyalam (聂拉木), Qianghai-Xizang Exped. 6662 (PE); Zham (樟木), PE 956695 (PE); Dinggye (定结), Qinghai-Xizang Exped. 3871 (PE); Cona (错那), T. K. Mi *et al.* (米泰康等) 827 (PE); Nyingchi (林芝), T. Naito *et al.* 1086 (PE); Bomi, B. S. Li *et al.* 6569 (PE).

India (印度). NE India, D. Runge 1013 (FI); Guhan, R. N. Parker 2799 (UC); Sitapur, B. A. Naithani 47919 (G); Assam, Tha Chu Valley, F. K. Ward 19558 (BM); Punjab, Bashahr, Simla, R. N. Parker 3032 (UC); Darjeeling, H. Kankai *et al.* 149 (BM).

Nepal (尼泊尔). Saingaoon, J. B. Shrestha 4077 (US); Kuinekhani, J. D. A. Stainton *et al.* 2840 (G); Bhurundi Khola, J. D. A. Stainton *et al.* 5401 (G); Marsiandi Valley, D. G. Lowndes 906 (G); Mt. Sheoppore, N. Wallich 4985 [B, BM, G (3), L]; Taksindhu, D. McCosh 60 (BM); Godavari, K. Wescae 71208 (BM); Lachhi Gad, J. F. Dobremez 2004 (BM); Nepal Valley, D. Proud 158 (BM); Tarakhola, J. D. A. Stainton *et al.* 175 (BM); Gatlang, J. D. A. Stainton 3636 (BM); Khater Dare, O. Polunin *et al.* 866 (BM); Sheopuri, D. Proud 126 (BM); Langtang, O. Polunin 604 (BM); Kali Gandaki, G. Miehle 794 (BM).

Myanmar (缅甸). Adung Valley, F. K. Ward 9530 (BM); Triangle, F. K. Ward 20884 (BM).

Sikkim (锡金). G. King 2215 (FI).

本种的叶片呈倒披针形至倒卵形,花通常为红色,少紫红色、粉红色或粉白色,最大花被片长 10~20 mm,雄蕊 25~70 枚,心皮 35~120 枚。分布于各地的植株,叶的形状没有多少变化;在分布区西部(喜马拉雅山脉中部)的植株,其花较大,花各部数目较多,花托和果托较长或粗;向东(从横断山脉直至武陵山脉东部)分布的植株,花渐小,花各部数目渐少,花托和果托渐短或细。由于花各部数目的变化呈连续变异,在地理分布上没有隔离,因此前人命名为 *S. flaccidiramosa*、*S. grandiflora*、*S. incarnata*、*S. rubriflora*、*S. sphaerandra* 的植物为同一物种。

查阅 *S. glaucescens* 的模式标本(发表时仅列举 1 号果标本),到模式产地调查并核对

产地标本,证实它就是大花五味子。

在花药外侧向或外向开裂的种类中,本种以叶无毛,花通常红色而易与其它种区别。

5 二色五味子(中国树木志)

Schisandra repanda (Sieb. & Zucc.) Radlk. in Sitz. Math.-Phys. Cl. Konigl. Bayer. Akad. Wiss. Munch. 16: 303. 1886. — *Trochostigma repanda* Sieb. & Zucc. in Abh. Math.-Phys. Cl. Konigl. Bayer. Akad. Wiss. 3: 728. 1843. — *Schisandra repanda* (Sieb. & Zucc.) A. C. Smith in Sargentia 7: 143. 1947, syn. nov. TYPE: Japan. s. loc., in 1842, P. F. von Siebold s. n. (lectotype, here designated, M-0003863, M!; isoelectotypes, K, M!).

Schisandra nigra Maxim. in Bull. Acad. Sci. St. Petersb. 17: 144. 1872. TYPE: Japan. Kundsho-san, Kyushu, in 1863, C. J. Maximowicz s. n. (lectotype, K; isoelectotype, GH).

S. bicolor Cheng in Contr. Biol. Lab. Sci. Soc. Chin. Bot. ser. 8: 137, f. 5. 1932, syn. nov. TYPE: China. Zhejiang, Linan, W Tianmushan, W. C. Cheng 3656 (holotype, PE 17587, PE!; isotypes, IBSC! NAS! PE!).

S. discolor Nakai, Fl. Sylv. Kor. 20: 103. 1933. TYPE: Japan. Miyajima, Aki, B. Hayata s. n. (holotype, TI).

S. tuberculata Law in Bull. Bot. Res. 3(3): 148, f. 1983, syn. nov. — *S. bicolor* Cheng var. *tuberculata* (Law) Law in Fl. Reip. Pop. Sin. 30(1): 273. pl. 78: 1~11. 1996, syn. nov. TYPE: China. Guangxi, Longsheng, Z. Z. Chen 51104 (holotype, PE!; isotype, IBK!).

产中国、日本和韩国,生于海拔 100~1500 m 的林中和灌丛中。

China(中国). **Anhui**(安徽): Yuexi (岳西), Forestry Exped. (林业队) 21 (IBSC); Jinzhai (金寨), s. coll. 377 (PE). **Guangxi**(广西): Longsheng, Z. Z. Chen 51104 (IBK, PE), H. F. Qin & S. L. Yu (覃灏富, 余少林) 700658 [IBSC (2)]; Guangfu For. Exped. (广福林队) 872 (IBSC, PE). **Hunan**(湖南): Wugang, L. H. Liu & G. Z. He 16342 (HN-NU, IBSC, PE); Xingning, P. C. Tam 63323 (IBSC); Chengbu, P. C. Tam. 63781 (IBK); Ningyuan (宁远), P. C. Tam 62661 (IBK); Jianghua, C. J. Qi 6289 (CSFI); Jiangyong (江永), D. L. Zhang (张冬林) 1351 (CSFI); Yizhang, M. X. Huang 112217 (HNNU, IBSC), P. H. Liang & H. H. Hsue (梁宝汉, 徐祥浩) 85161 (IBSC). **Jiangxi**(江西): Anyuan, C. M. Hu 2786 (SHM); Shangrao (上饶), M. X. Nie 5019 (PE); Suichuan, J. Xiong 2978 (LBC); Anfu, Y. G. Xiong 8622 (LBC). **Yunnan**(云南): Maguan, Q. A. Wu (武全安) 8388 (KUN). **Zhejiang**(浙江): Anji (安吉), S. H. Xu (许树洪) L85-32-146 (IBSC); Linan, W Tianmushan, W. C. Cheng 3656 [IBSC, NAS, PE (4)].

Japan(日本). Iwate, H. Ohashi *et al.* 22175 (IBSC); Shizuoka, Mt. Fujiyama, in 1862, C. Maximowicz s. n. (BM, M, P, US); Senano, in 1864, Tschonoski s. n. (BM, FI, M, P, US); Kyoto, K. Tsuchiya 437 (Z); Hyogo, E. W. Wood & D. E. Boufford 3874 (CAS); Shiga, G. Koidzumi s. n. (Z); Iwaki, M. Furuse s. n. (UC); Toyama, J. Jutila *et al.* 399 (RSA); Shiga, G. Murata 30125 (Z); Kai, M. Furuse 27326 (PE); Yamanashi, M. Furuse 21396 (PE); Nagano, M. Furuse 38791 (PE); Iwaki, M. Furuse 30861 (PE); Musashi, M. Furuse 34022 (PE); s. loc., in 1842, P. F. von Siebold s. n., M-0003862, M-0003863, M-

0003864, M-0003865 (M).

P. O. Korea(韩国). Taquet 165 (BM).

查阅产自中国、日本和韩国(分别定名为 *S. bicolor*、*S. nigra*、*S. repanda*、*S. tuberculata*)的标本,其叶、花、果实的特征完全一致,只是产自日本和华东地区的标本枝条通常不呈黑色,无瘤状凸起,而产自华南地区的标本基本上均呈黑色和有瘤状凸起,但亦有例外,如产自日本的标本[M. Furuse 27326, 34022 (PE); G. Koidzumi s. n. (Z)],其小枝为黑色,瘤状凸起明显;查阅 *S. bicolor* 的模式标本,同一采集号有 6 份,其中取自下段枝条的 2 份标本(PE 31516 (2), PE)的小枝为紫黑色,枝上瘤状凸起明显。解剖瘤状凸起,不过是真菌侵入皮孔引发的凸起,或叶柄脱落痕的膨大。由此可知,它们为同一植物。

在雄花的花托为扁平五角星形的种类中,本种以叶基圆形,叶痕膨大而易与其它种区别。

6 铁箍散 (俗名)

Schisandra propinqua (Wall.) Baill. Hist. Pl. 1:148, f. 183. 1868. — *Kadsura propinqua* Wall. Tent. Fl. Nepal. 2: t. 15. 1824. — *Sphaerostema propinqua* (Wall.) Bl. Fl. Java. 15. 1830. TYPE: Nepal. Sankoo, Mt. Sheopore, N. Wallich 4986 (lectotype, K-W; isolectotypes, BM! C, G! K).

Sphaerostema axillare Bl. Bijdr. Fl. Ned. Ind. 25. 1825, syn. nov. — *Schisandra axillaris* (Bl.) Hook. f. & Thoms. in Hook. f. Fl. Brit. India 1: 45. 1872, syn. nov. — *Schisandra propinqua* (Wall.) Baill. subsp. *axillaris* (Bl.) R. M. K. Saunders in Edinb. Journ. Bot. 54(3): 282, f. 2. 1997, syn. nov. TYPE: Indonesia. Java, Mt. Tjareme, Blume 66 (lectotype, BO).

S. pyrifolium Bl. Fl. Javae 16. t. 4. 1830, syn. nov. TYPE: Indonesia. Java, Tjiandjoer, C. G. C. Reinwardt s. n. (lectotype, L!; isolectotypes, B! BM! L!).

Schisandra propinqua (Wall.) Baill. var. *sinensis* Oliv. in Hook. Icon. Pl. 18: pl. 1715. 1887, syn. nov. — *S. propinqua* (Wall.) Baill. subsp. *sinensis* (Oliv.) R. M. K. Saunders in Edinb. Journ. Bot. 54(3): 280. 1997, syn. nov. TYPE: China. Hubei, Yichang, A. Henry 1544 (lectotype, K; isolectotypes, B! E! GH).

Schisandra propinqua (Wall.) Baill. var. *linearis* Finet & Gagnep. in Bull. Soc. Bot. France 52: Mem. 4: 51. 1905, syn. nov. TYPE: China. Hubei, Yichang, A. Henry 1544 (lectotype, K; isolectotypes, B! E! GH).

Embelia valbrayi Levl. Cat. Pl. Yun-Nan 177. 1916, syn. nov. TYPE: China. Yunnan, La-kou, in 1912, E. E. Maire s. n. (lectotype, E!; isolectotype, A).

Schisandra propinqua (Wall.) Baill. var. *intermedia* A. C. Smith in Sargentia 7: 152, f. 28. 1947, syn. nov. — *S. propinqua* (Wall.) Baill. subsp. *intermedia* (A. C. Smith) R. M. K. Saunders in Edinb. Journ. Bot. 54(3): 278. 1997, syn. nov. TYPE: China. Yunnan, Teng-chong, G. Forrest 7692 (holotype, A; isotypes, E! IBSC! K).

产不丹、中国、印度、印度尼西亚、缅甸、尼泊尔、锡金和泰国,生于海拔 200 ~ 2200 m 的山地沟谷、山坡常绿阔叶林中。

China(中国). **Chongqing**(重庆): Wushan, H. F. Zhou 109641 (PE); Fengjie, H. F.

Zhou et al. 26818 (PE); Wuxi, K. L. Chu 1736 (IBSC); Nanchuan, Q. Lin 985 (PE); Yunyang (云阳), Yun (云) 73-7 (SM); Chengkou, T. L. Dai 103364 (PE); Xiushan, S. Jiang *et al.* 1666 (PE); Wulong (武隆), Z. Y. Liu 971105 (IMC); Panshui (彭水), Z. Y. Liu 1191 (IMC). **Fujian**(福建): Guangzhe (光泽), M. J. Wang (王名金) 2619 (IBSC); Shaowu, H. C. Zhou 5057 (IBSC). **Gansu**(甘肃): Wenxian, Y. Q. He (何叶琪) 1094 (PE). **Guangxi**(广西): Fuchuan (富川), Fuchuan Exped. 7-059 (GXMI); Jinxiu, G. R. Long 840262 (IBSC); Longlin, J. Y. Liang *et al.* (梁健英等) K9487 (IBK); Napo, D. Y. Liu (刘达雨) 22271 (GXMI). **Guizhou**(贵州): Daozhen, Z. Y. Liu 20109 (PE); Anlong, Guizhou Exped. 3605 (PE); Xingren, C. Z. Dang *et al.* 205 (PE); Xingyi (兴义), Guizhou Exped. 6502 (PE); Wengan (瓮安), Libo Exped. 1898 (PE). **Henan**(河南): Neixiang (内乡), Henan Exped. 681 (PE); Xixia, Henan Bur. For. Exped. (河南林业厅队) 1422 (PE). **Hubei**(湖北): Fangxian, K. M. Liou 8984 (PE); Zhuxi (竹溪), K. M. Liou 8710 (PE); Changyang, E. H. Wilson 1304 (E, IBSC); Xingshan, H. J. Li 126 (PE); Yichang, A. Henry 1544 (B, E), A. Henry 1693 (BM, US), A. Henry 2028 (BM), A. Henry 3243 (US), A. Henry 6219 (E); Yingshan (英山), M. X. Nie 264 (IBSC); Shennongjia, Shennongjia Exped. 14026 (PE); Badong, T. P. Wang 10800 (PE); Jianshi, L. Y. Dai *et al.* 515 (PE); Lichuan, Hubei Exped. 14026 (PE); Xuanen, H. J. Li 2945 (IBSC); Hefeng, H. J. Li 8057 (PE); Enshi, Q. H. Liu (刘启宏) 626 (IBSC). **Hunan**(湖南): Yuanling (沅陵), G. C. Zhang 432 (IBSC); Dayong, X. G. Li 204722 (IBSC); Shimen, PE 1117587 (PE); Yongshun, Hunan Exped. 24 (PE); Cili, C. J. Qi 30130 (CSFI); Sangzhi, C. J. Qi 30325 (CSFI); Anjiang, s. coll. 150 (PE); Qianyang, Anjiang Agr. School Exped. (安江农校队) 608 (PE). **Shaanxi**(陕西): Chenggu (城固), K. J. Fu 5418 (PE); Yangxian, T. N. Liou *et al.* 3843 (PE); Lueyang (略阳), Y. S. Lian *et al.* (廉永善等) 96243 (PE); Shanyang, T. P. Wang 16535 (PE). **Sichuan**(四川): Chengdou (成都), F. T. Wang 22166 (PE); Jintang (金堂), Sichuan Med. Pl. Exped. (川药队) 32 (SM); Miyi, S. Y. Chen (陈善塘) 10563 (SM); Xuyong, M. F. Zhong *et al.* 501 (SM); Pingwu, Sichuan Med. Pl. Exped. 13197 (SM); Yanting (盐亭), Sichuan Econ. Pl. Exped. 6067 (SM); Qingchuan, s. coll. 2854 (SM); Jiange (剑阁), T. N. Liou *et al.* 264 (PE); Guangyuan (广元), T. N. Liou 190 (PE); Cangxi, Z. S. Qin (秦自生) 2748 (SM); Ebian, Sichuan Econ. Pl. Exped. 1767 (PE); Emei, T. N. Liou 12261 (PE); Jiajiang (夹江), Sichuan Econ. Pl. Exped. 8154 (PE); Pingshan, F. T. Wang 22731 (PE); Guangan, 72N-19 (SM); Wanyuan, P. Y. Li 6745 (PE); Yingjing, W. G. Hu (胡文光) 12134 (PE); Shimian, C. J. Xie 41618 (IBSC); Baoxing, T. P. Soong 39377 (PE); Tianquan, T. H. Tu 4638 (PE); Yaan (雅安), C. Y. Chiao 1163 (N); Xichang, K. L. Chu 4003 (IBSC); Puge, H. C. Zhou 515 (IBSC); Leibo, T. T. Yu 3493 (PE); Yuexi, s. coll. 13986 (PE); Jingyang, Sichuan Econ. Pl. Exped. 3412 (PE); Butuo, Sichuan Econ. Pl. Exped. 5799 (SM); Huidong (会东), S. K. Wu 261 (SM). **Yunnan**(云南): Kunming, T. N. Liou 13103 (PE); Songming, P. I. Mao 209 (PE); Fuming (富民), B. Y. Qiu 596046 (PE); Xundian, B. Y. Zhang 869 (IBSC); Luquan, P. I. Mao 1336 (PE); Shizong (师宗), Shizong Exped. 394 (IBSC); Zhaotong (昭通), H. W. Li (李锡文) 36 (KUN);

Fengqing, T. T. Yu 16315 (PE); Tengchong, G. Forrest 7686 (IBSC), G. Forrest 7692 (E, IBSC); Lijiang, K. M. Feng 9303 (IBSC); Pingbian, H. T. Tsai 61333 (PE); Kaiyuan (开远), P. C. Tsoong *et al.* 493 (PE); Shuangbai (双柏), H. T. Tsai 54643 (PE); Xiangyun (祥云), F. Ducloux 468 (IBSC); Heqing, R. C. Ching 24563 (PE); Yangbi, R. C. Ching 25344 (PE); Weixi, K. M. Feng 4978 (PE); Gongshan, T. T. Yu 22015 (PE); Lushui, NW Yunnan Exped. 10352 (PE); s. loc., H. T. Tsai 57088 (IBSC). **Xizang** (西藏): Gyirong, Qinghai-Xizang Exped. 46099 (IBSC); Zaya, Z. C. Ni 552 (PE).

India (印度). Assam, Dirang Dzong, F. K. Ward 11497 (BM); Shillong, C. B. Clarke 44411C (BM); Ukhrul, F. K. Ward 17754 (BM); Khaiyang, F. K. Ward 17495 (BM); Naga Hills, F. K. Ward 19035 (BM).

Indonesia (印度尼西亚). Bali, H. W. Schwabe 1987 (B); Java, Tjiandjoer, C. G. C. Reinwardt s. n. [B, BM, L (4)].

Myanmar (缅甸). Ukhrul, F. K. Ward 17754 (BM).

Nepal (尼泊尔). Iladanda-Selap, H. Hara *et al.* 6303834 (BM); Kathmandu, S. B. Malla 6584 (BM); Phuleli, A. Zimmermann 1945 (BM); Pasgam, J. D. A. Stainton *et al.* 5933 (L); Ahun Valley, J. D. A. Stainton 688 (BM); Sankoo, Mt. Sheopore, N. Wallich 4986 [BM (2), G (4)].

Sikkim (锡金). Andovsor 18 (P).

Thailand (泰国). Lampang: Muang Bahn (Pan), J. F. Maxwell 95-1194 (CAS).

前人将本种描述为落叶植物。10 余年来,笔者对栽培于华南植物园的本种植物进行观察,均四季常青;在南川县金佛山考察时,发现生于该山的此植物也是常绿的;查阅标本,时常可见在标本的 2 年生枝上亦有叶。因此,本种实为常绿植物。

Saunders (1997) 在前人工作的基础上研究了较多的标本,将一些名称作了改级或归并处理,但从他的分析中也可看到,几个亚种的性状互相重叠。我们查阅模式标本和整个分布区中的标本,发现该植物从分布区的西部至东部,或从北部往南部,叶片从较宽大型变化至较狭窄型,叶缘从具粗齿至浅齿,直至出现有全缘叶,花被片数目和雄蕊数目出现递减趋势,花梗长度也渐短,但都没有出现间断类型。因此,将上述各名称作归并处理。

本种以叶常绿,叶缘有齿(若全缘,则宽不过 2.5 cm)而易于识别。

经上述分类学处理后,本文确认全世界现有五味子属植物 10 种。除此 6 种外,本人对另 4 种 [*S. lancifolia* (Rehd. & Wils.) A. C. Smith, *S. chinensis* (Turcz.) Baill., *S. glabra* (Brick.) Rehd. 和 *S. plena* A. C. Smith] 的意见与 Saunders (2000) 的相同。为方便鉴定,特将它们用检索表区别如下:

五味子属分种检索表

1. 叶冬季脱落;花单生。
2. 雄花的花托圆柱形或圆锥形。
3. 花药内向或内侧向开裂。
4. 叶无毛。
5. 幼枝圆柱形,芽鳞早落,叶背通常绿色。
6. 叶卵状椭圆形、卵形、圆形至倒卵形,通常宽 2.5~9 cm 1. 东亚五味子 *S. elongata*

6. 叶披针形至狭椭圆形, 宽 1~2.5 cm 2. 狭叶五味子 *S. lancifolia*
5. 幼枝具纵向翅状棱, 芽鳞宿存至幼果期, 叶背通常灰白色或被白粉 3. 翼梗五味子 *S. henryi*
4. 叶背多少被毛 4. 毛叶五味子 *S. pubescens*
3. 花药外向或外侧向开裂。
 7. 叶无毛; 花通常红色 5. 大花五味子 *S. grandiflora*
 7. 叶背脉上被毛; 花淡黄色 6. 北五味子 *S. chinensis*
2. 雄花的花托扁平五角星形。
 8. 叶片卵状椭圆形至阔披针形, 基部楔形 7. 北美五味子 *S. glabra*
 8. 叶片宽卵形至近圆形, 基部圆形 8. 二色五味子 *S. repanda*
1. 叶常绿性; 花单生或 2~3 朵聚生, 有时由 3~8 朵花组成总状花序或圆锥花序。
 9. 叶狭披针形至卵形, 叶缘有齿, 若全缘则叶宽不过 2.5 cm 9. 铁箍散 *S. propinqua*
 9. 叶卵形至椭圆形, 宽 3cm 以上, 全缘 10. 重瓣五味子 *S. plena*

A key to species in the genus *Schisandra* Michx.

1. Deciduous vines. Flowers solitary.
 2. The male flowers with cylindrical or tapered torus.
 3. Anthers introrse or introrse-lateral.
 4. Leaf blades glabrous.
 5. Young branchlets terete, bud scales fugacious, leaf blades usually green or greenish on abaxial surface.
 6. Leaf blades ovate-elliptic, ovate, orbicular to obovate, usually 2.5~9 cm wide (Bhutan, China, India, Indonesia, Myanmar, Nepal, Sikkim, Sri Lanka, Thailand and Vietnam) 1. *S. elongata*
 6. Leaf blades lanceolate to narrowly elliptic, 1~2.5 cm wide (China) 2. *S. lancifolia*
 5. Young branchlets winged or sharply angled, bud scales subpersistent at bases of annual shoots, leaf blades usually glaucous on abaxial surface (China, Thailand and Vietnam) 3. *S. henryi*
 4. Leaf blades more or less pubescent on abaxial surface (China and Vietnam) 4. *S. pubescens*
 3. Anthers extrorse or extrorse-lateral.
 7. Leaf blades glabrous; flowers usually red (Bhutan, China, India, Nepal, Myanmar, Sikkim and Thailand) 5. *S. grandiflora*
 7. Leaf blades pubescent on the nerves on abaxial surface; flowers yellowish (China, Japan, D. P. R. Korea, P. O. Korea and Russia) 6. *S. chinensis*
 2. The male flowers with plane and star-shaped torus.
 8. Leaf blades ovate-elliptic to broadly lanceolate, base cuneate (Mexico and U. S.) 7. *S. glabra*
 8. Leaf blades broadly ovate to nearly orbicular, base rounded (China, Japan and P. O. Korea) 8. *S. repanda*
1. Evergreen vines. Flowers solitary, 2~3-clustered, or racemes or panicles with 3~8 flowers.
 9. Leaf blades narrowly lanceolate to ovate, margins serrate, if margins entire then leaf blades less than 2.5 cm wide (Bhutan, China, India, Indonesia, Myanmar, Nepal, Sikkim and Thailand) 9. *S. propinqua*
 9. Leaf blades ovate to elliptic, more than 3 cm wide, margins entire (China and India) 10. *S. plena*

致谢 感谢下列标本馆馆长给予借阅标本、查阅标本、交换标本、赠送标本复印件、赠送标本像片或标本资料: A, B, BH, BJFC, BM, BNU, CAF, CANT, CAS, CSFI, E, F, FI, FNU, G, GXMI, HBG, HNNU, HUFI, HZU, IBK, IBSC, IBSD, IMC, IMD, KEP, KUN, L, LBG, LINN, LZU, M, N, NAS, NYA, P, PE, PEY, PH, PNH, RSA, SCFI, SHM, SING, SM, SNUA, SYS, SZ, TAI, UC, US, YUKU, Z.